

All gasoline engines  
Except engines with breakerless transistorized ignition

## Dwell angle and ignition timing

Engine	Dwell angle adjusting value for new contacts at idling speed <sup>1)</sup> with transistorized ignition <sup>2)</sup>	Ignition timing adjusting value			
		Model year <b>1972</b>	Model year <b>1973/74</b>	Model year <b>1975/76</b>	Model year <b>1977</b>
		Adjusting value <b>at idling speed</b>			
		<b>with</b> vacuum	<b>with</b> vacuum	<b>with/without</b> vacuum	<b>with</b> vacuum
100	$30^\circ \pm 1^\circ$	5° ATDC	—	—	—
110	$34^\circ \pm 1^\circ$	—	4° ATDC	with 7° BTDC	—
115	$47^\circ \pm 1^\circ$	5° ATDC	10° BTDC	without 10° BTDC	10° BTDC
117	$30^\circ \pm 1^\circ$	5° ATDC	5° ATDC	with TDC	—
130.923		4° ATDC	—	—	—
130.980		6° ATDC	—	—	—

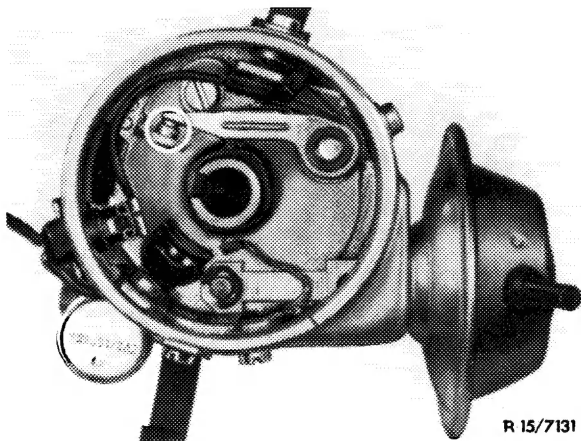
<sup>1)</sup> Dwell angle change between idling speed and 3000/min = max.  $\pm 3^\circ$ .

<sup>2)</sup> Identification: "blue" ignition coil, two series resistances and transistorized switching unit.

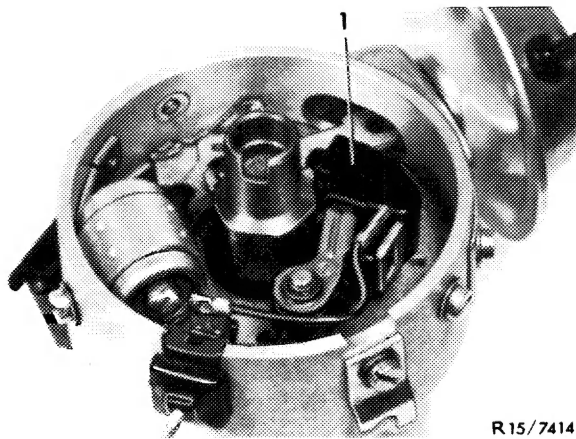
## Conventional tools

Dwell angle measuring instrument, stroboscope, tachometer





R 15/7131



R 15/7414

1 Protective cover



R 07/6568

### Adjust dwell angle

- Connect testers; for vehicles with transistorized ignition (refer to job no. 781).
- With engine at starting speed adjust dwell angle to correct setting.

On ignition distributors with protective cover (1), cover must be removed for replacing contact breaker points. When attaching cover, make sure that cover engages well and will not wipe against distributor shaft.

On ignition distributors with 2 pairs of contact breaker points, adjust dwell angles **individually**. For this purpose, make one contact pair inoperative by inserting an insulating shim.

- Check dwell angle at idling speed and adjust, if required.
- Check dwell angle change. When the speed increases from idling to 3000/min, the dwell angle change may be max.  $\pm 3^\circ$ .

Large dwell angle = small contact gap.  
Small dwell angle = large contact gap.

### Adjust ignition timing

- Switch-off air-conditioning.
- Check ignition timing with stroboscope at prescribed engine speed with or without vacuum hose, adjust if necessary.

For adjustment, release distributor clamps slightly (see arrow) and adjust ignition timing by turning the distributor.

Towards the right = retard timing  
Towards the left = advanced timing

- On ignition distributors with two pairs of contact breaker points, check firing point of 5th cylinder in addition.

If the test value is not attained, adjust contact plate in ignition distributor and check timing angle once again.

- Tighten fastening screw of ignition distributor and check firing point once again.